

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

C mplete If Known	
Application Number	10/057,014
Filing Date	January 24, 2002
First Named Inventor	Krishnaraj, Padmanabhan
Art Unit	1765
Examiner Name	Not Yet Known
Attorney Docket Number	A5597/T41100

RECEIVED

MAY 30 2002

TC 1760

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
M>	AA	US-5,468,342	11/21/95	Nulty et al.	
	AB	US-5,624,582	4/29/97	Cain	
	AC	US-5,679,606	10/21/97	Wang et al.	
	AD	US-5,858,876	1/12/99	Chew	
	AE	US-5,913,140	6/15/99	Roche et al.	
	AF	US-5,915,190	6/22/99	Pirkle	
	AG	US-5,937,323	8/10/99	Orczyk et al.	
	AH	US-5,953,635	9/14/99	Andideh	
	AI	US-5,968,610	10/19/99	Liu et al.	
	AJ	US-5,990,000	11/23/99	Hong et al.	
	AK	US-6,059,843	5/9/00	Hu et al.	
	AL	US-6,191,026	2/20/01	Rana et al.	
	AM	US-6,194,038	2/27/01	Roszman	
	AN	US-6,197,705	3/6/01	Vassiliev	
	AO	US-6,203,863	3/20/01	Liu et al.	
M>	AP	Appl. No. 09/854,083	Filed: 5/11/01	Tan et al.	
	AQ	US-			
	AR	US-			
	AS	US-			
	AT	US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
	AU							
	AV							
	AW							
	AX							
	AY							
	AZ							
	BA							
	BB							

Examiner Signature	<i>Mart B</i>	Date Considered	11/16/02
--------------------	---------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

DE 7071521 v1



Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTC

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2

of 1

Complete If Known

Application Number	10/057,014
Filing Date	January 24, 2002
First Named Inventor	Krishnaraj, Padmanabhan
Art Unit	1765
Examiner Name	Not Yet Known
Attorney Docket Number	A5597/T41100

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MD	BC	V.Y., VASSILIEUV et al., "Trends in void-free pre-metal CVD dielectrics," Solid State Technology, pp. 129-136, www.solid-state.com (March 2001)	
	BD		
	BE		
	BF		
	BG		
	BH		
	BI		
	BJ		
	BK		
	BL		
	BM		

Examiner Signature

Date Considered

11/15/03

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Unique citation designation number. ³ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
DE 7071521 v1

Please type a plus sign (+) inside this box →

PTO/SB/08B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Complete If Known

Application Number	
Filing Date	10/05/01
First Named Inventor	Krishnaraj, Padmanabhan
Group Art Unit	
Examiner Name	
Attorney Docket Number	A5597/T41100

10/05/01
10/05/01
01/24/02

#1

U.S. PATENT DOCUMENTS						
Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
MJ	AA	4,872,947		Wang et al.	10/10/89	
	AB	4,892,753		Wang et al.	01/09/90	
	AC	4,960,488		Law et al.	10/02/90	
	AD	5,279,865		Chebi et al.	01/18/94	
	AE	5,302,233		Kim et al.	04/12/94	
	AF	5,362,526		Wang et al.	11/08/94	
	AG	5,416,048		Bhalock et al.	05/16/95	
	AH	5,599,740		Jang et al.	02/04/97	
	AJ	5,719,085		Moon et al.	02/17/98	
	AJ	5,850,105		Lawson et al.	12/15/98	
	AK	5,872,052		Iyer	02/16/99	
	AL	6,030,881		Papasouliotis et al.	02/29/00	
	AM	6,167,834		Wang et al.	01/02/01	
	AN	6,170,428		Redeker et al.	01/09/01	
	AO	6,182,602		Redeker et al.	02/06/01	
MJ	AP	8,189,483		Ishikawa et al.	02/20/01	
	AQ					
	AR					
	AS					
	AT					

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Office ³	Number ⁴	Kind Code ⁵ (if known)		
	AU					
	AV					
	AW					
	AX					
	AY					
	AZ					
	BA					
	BB					

Examiner Signature	<i>Mart Sj</i>	Date Considered	11/17/03
--------------------	----------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
DE 7051381 v1

Please type a plus sign (+) inside this box →

PTO/SB/08B (08-00)

Approved for use through 10/31/2002, OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO		<i>Complete if Known</i>	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	
(use as many sheets as necessary)		Filing Date	
Sheet	2	First Named Inventor	Krishnaraj, Padmanabhan
		Group Art Unit	
		Examiner Name	
		Attorney Docket Number	A5597/T41100

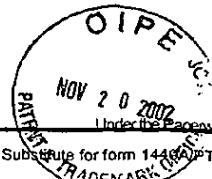
FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear T ²	
		Office ³	Number ⁴				
OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS							
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					T ²
	BC						
	BD						
	BE						
	BF						
	BG						
	BH						
	BI						
	BJ						
	BK						
	BL						
	BM						

Examiner Signature	<i>Matt B</i>	Date Considered	<i>11/11/03</i>
--------------------	---------------	-----------------	-----------------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
DE 7051381 v1



Substitute for form 1449A (PTO)

• 8 2002

PTO/SB/08A (10-01)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

<p>Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.</p> <p>Substitute for form 1449 (AFTO)  INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i></p>		<p>Complete if Known</p> <table border="1"> <tr> <td>Application Number</td> <td>10/057,014</td> </tr> <tr> <td>Filing Date</td> <td>January 24, 2002</td> </tr> <tr> <td>First Named Inventor</td> <td>Krishnaraj, Padmanabhan</td> </tr> <tr> <td>Art Unit</td> <td>1765</td> </tr> <tr> <td>Examiner Name</td> <td>Unassigned</td> </tr> <tr> <td>Attorney Docket Number</td> <td>A5597/T41100</td> </tr> </table>	Application Number	10/057,014	Filing Date	January 24, 2002	First Named Inventor	Krishnaraj, Padmanabhan	Art Unit	1765	Examiner Name	Unassigned	Attorney Docket Number	A5597/T41100
Application Number	10/057,014													
Filing Date	January 24, 2002													
First Named Inventor	Krishnaraj, Padmanabhan													
Art Unit	1765													
Examiner Name	Unassigned													
Attorney Docket Number	A5597/T41100													
Sheet	1	of	1											

U.S. PATENT DOCUMENTS

RECEIVED

NOV 22 2002

TC 1700

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)			
MJ	AH	JP	2-58836	A	02-28-1990		
MJ	AI	JP	7-161703	A	06-23-1995		

Examiner
Signature

Mark S. S.

Date Considered

1/17/23

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3262613 v1



I understand the Paperwork Reduction Act of 1995 requires persons to respond to a collection of information unless it contains a valid OMB control number.

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
is exempted from a collection of information unless it contains a valid OMB control number.

PTO/SB/08A (10-01)

Substitute for form 1449A/PTC

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

<i>C</i> <i>mpl</i> <i>te If Known</i>	
Application Number	10/057,014
Filing Date	January 24, 2002
First Named Inventor	Krishnaraj, Padman
Art Unit	1765
Examiner Name	Unassigned
Attorney Docket Number	A5597/T41100

RECEIVED
AUG 12 2002
L. T. COON

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

1

Math 8

Date
Considered

4/23/33

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

PA 3237972 v1



U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Approved for EPO through 10/31/2002. GMD 0031-0001
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

PTO/SB/088 (10-01)
Approved for use through 10/31/2002. OMB 0851-0031

Substitution for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Substitution for form 1449B/PTO 8 TRADEMARKS		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <small>(use as many sheets as necessary)</small>		Application Number	10/057,014
		Filing Date	January 24, 2002
		First Named Inventor	Krishnaraj, Padmanabhan
		Art Unit	1765
		Examiner Name	Unassigned
Sheet	2	of	2
		Attorney Docket Number	A5597/T41100

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	11/12/03
-----------------------	---	--------------------	----------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.
P-00070720

PA 3237972 v1